

REMARKS/ARGUMENTS

Claims 1-3, 5-9, 11 and 14-20 are present in this application. By this Amendment, claims 1, 5, 11, 14 and 19 have been amended, and claims 4, 10, 13 and 21-23 have been canceled. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

The drawings were objected to under 37 C.F.R. §1.83(a). This objection is respectfully traversed. Applicants refer the Examiner to Fig. 3, which is a side view of the attachment 10 showing the coupling section 12 fixed to a portion of the telehandler T. The telehandler is also shown in Figs. 4, 6 and 10. Claim 1, for example, recites that the manipulation assembly is movable in at least five degrees of freedom independent from additional degrees of freedom provided by movements of the telescopic material handler. The structure shown in the figures is clearly movable independent from any movement of the telehandler, and Applicants thus submit that the drawings satisfy the requirements of 37 C.F.R. §1.83(a). Withdrawal of the objection is requested.

Claims 1-3, 14 and 15 were rejected under 35 U.S.C. §103(a) over U.S. Patent No. 3,630,389 to Schmidt in view of U.S. Patent No. 3,598,263 to Ehmke and German Patent Publication DE 3834311 to Kohnen. Without conceding this rejection, claim 1 has been amended to include the subject matter of claim 13, which is not included in this rejection, and claim 14 has been amended to include the subject matter of claims 21 and 22, which also are not included in this rejection. As such, Applicants submit that the rejection is moot. Withdrawal of the rejection is requested.

Claim 4 was rejected under 35 U.S.C. §103(a) over Schmidt in view of Ehmke, Kohnen and U.S. Patent No. 4,878,798 to Johansson. Without conceding this rejection, the subject

matter of claim 4 has been incorporated into claim 11, which has been rewritten in independent form. Applicants thus submit that this rejection is moot. Withdrawal of the rejection is requested.

Claims 5 and 23 were rejected under 35 U.S.C. §103(a) over Schmidt in view of Ehmke, Kohnen, Johansson and U.S. Patent No. 4,460,208 to Hoffman. Without conceding this rejection, claim 5 has been amended to depend from claim 1, which as noted above, has been amended to include the subject matter of claim 13. Claim 23 has been canceled. Applicants thus submit that this rejection is moot. Withdrawal of the rejection is requested.

Claim 6 was rejected under 35 U.S.C. §103(a) over Schmidt in view of Ehmke, Kohnen, Johansson, Hoffman and U.S. Patent No. 5,690,377 to Tanaka. Without conceding this rejection, Applicants note that claim 6 is dependent on claim 5, which in turn is dependent on claim 1, which as noted has been amended to include the subject matter of claim 13. As such, Applicants submit that the rejection of claim 6 is moot. Additionally, Applicants submit that the Tanaka patent does not disclose the subject matter defined in claim 6. Claim 6 recites that each independent circuit of the gripping system comprises a manifold valve that separates its respective vacuum reservoir from the vacuum pump. Upon failure of the vacuum pump, each of the manifold valves closes to preserve vacuum in its respective reservoir. Claim 6 thus requires each independent circuit of the gripping system to include a manifold valve. As a consequence, the manifold valves according to the invention defined in claim 6 serve as a safety system to prevent dropping the object being carried. In contrast, Tanaka discloses a system that uses manifolds to reduce the number of vacuum cups being used to pick up an object. The subject matter defined in claim 6 is thus structurally distinguishable from Tanaka. Withdrawal of the rejection is requested.

Claims 7-9 were rejected under 35 U.S.C. §103(a) over Schmidt in view of Ehmke, Kohnen, Johansson, Hoffman, Tanaka and U.S. Patent No. 6,467,824 to Bolotin et al. Without conceding this rejection, these dependent claims ultimately depend from independent claim 1, which as noted has been amended to include the subject matter of claim 13. Since claim 13 does not form part of this rejection, Applicants submit that this rejection is moot. Withdrawal of the rejection is requested.

Claim 10 was rejected under 35 U.S.C. §103(a) over Schmidt in view of Ehmke, Kohnen, Johansson, Hoffman, Tanaka, Bolotin, U.S. Patent No. 5,413,454 to Movsesian and U.S. Patent No. 5,142,803 to Lang. Without conceding this rejection, claim 10 has been canceled. Withdrawal of the rejection is requested.

Claim 11 was rejected under 35 U.S.C. §103(a) over Schmidt in view of Ehmke, Kohnen, Johansson and U.S. Patent No. 6,082,080 to Holter. This rejection is respectfully traversed.

Claim 11 has been rewritten in independent form. The Office Action recognizes that the combination of Schmidt, Ehmke, Kohnen and Johansson lacks at least the claimed clamp. In this context, however, the Office Action contends that Holter discloses a grip 170 and a clamp 100, 106 and concludes that it would have been obvious “to modify the apparatus of Schmidt to include a grip and clamp on the same apparatus, as per the teachings of Holter, for placing pallets prior to stacking goods.” Applicants respectfully disagree with this conclusion.

The Holter patent describes a complicated device for use in packing boxes on pallets. The device picks and places the boxes with a clamp 100, 106. The grip 170 is used to pick up cardboard sheets to place between layers of boxes on the pallet. The clamp in Holter thus is not cooperable with its grip to serve as a safety feature for supporting the same load. Rather, the clamp and grip in Holter are used separately and for different materials.

In an effort to clarify this distinction, in addition to rewriting claim 11 in independent form, claim 11 recites that the clamp is cooperable with and positioned relative to the vacuum pump, the plurality of vacuum cups and the vacuum reservoir to securely hold the load. Support for this subject matter can be found in, for example, paragraph [0043] and FIGS. 9 and 10. In this manner, the clamp serves as an added safety feature to hold the load in place if the vacuum system were to fail. Unlike Holter, the vacuum system and clamp are cooperable for use on the same object being manipulated by the device.

In view of at least this distinction, Applicants submit that claim 11 is patentable over the references of record. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 13, 19 and 20 were rejected under 35 U.S.C. §103(a) over Schmidt in view of Ehmke, Kohnen, Movsesian and Lang. As this rejection may be applied to the amended claims, this rejection is respectfully traversed.

As noted above, the subject matter of claim 13 has been incorporated into claim 1. Additionally, claim 1 recites that control of the load is transferable between the primary and secondary radio transmitters such that only one of the primary and secondary radio transmitters has control of the load at a time. Support for this subject matter can be found in the specification at, for example, paragraph [0039]. Claim 1 additionally recites that the attachment comprises control indicators providing a visual indication of which radio transmitter is in control of the load.

Movsesian describes a commercial, mobile robotic arm that is controlled by a radio system. The system is similar only in that it allows remote control of a mechanical system. In contrast with the claimed invention, however, the radio system described by Movsesian has a single transmitter 150 and input switches 154, 156, 158 mounted in an enclosure 148 which are

attached to the transmitter via a cable 152. There is only one transmitter in the Movsesian system. Item 12, which the Examiner references as a “secondary radio transmitter,” is rather merely the base of the device, and while it may contain a radio receiver, there is no second radio transmitter.

Additionally, Movsesian lacks any reference to transfer of control as defined in the claimed invention. In the Movsesian system, there are radio waves transmitting commands that are being translated to mechanical movements. In contrast, the system of the claimed invention includes two separate transmitters and a receiver (all shown in Fig. 1) and a clear way to pass control between the two transmitters. Simultaneous control of the mechanical movement by the transmitters is not permitted.

The Lang patent describes a remotely controlled robot for use in special effects. The radio system is used to transmit commands to the robot. Lang describes multiple controllers “which allows for added complexities of movement.” It is clear from the description in the Lang patent that control is not exclusive to a single controller. As noted, in the claimed system, only one transmitter can control the device at a specific time. Control can be given to the other transmitter, but both cannot be used to control the mechanical movement of the device simultaneously. This is an important distinction that is part of the device’s safety system.

Since at least this subject matter is lacking in the combination of references, Applicants respectfully submit that amended claim 1 is distinguishable from the applied references.

In a related context, claim 19, which has also been rewritten in independent form, defines a method of manipulating a load via an attachment to a telescopic material handler. Claim 19 recites that the method comprises enabling transferring of control of the load between the primary and secondary radio transmitters such that only one of the primary and secondary radio

transmitters has control of the load at a time. As discussed above, at least this subject matter is lacking in the applied references, and Applicants thus submit that the rejection of claim 19 is misplaced.

With regard to claim 20, Applicants submit that this dependent claim is allowable at least by virtue of their dependency on an allowable independent claim.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 16-18 were rejected under 35 U.S.C. §103(a) over Schmidt in view of Ehmke, Kohnen and Bolotin. Without conceding this rejection, Applicants note that these claims ultimately depend from independent claim 14, which as noted has been amended to include the subject matter of claims 21 and 22. Since these claims do not form part of this rejection, Applicants submit that this rejection is moot. Withdrawal of the rejection is requested.

Claims 21 and 22 were rejected under 35 U.S.C. §103(a) over Schmidt in view of Ehmke, Kohnen and Holter. As this rejection may be applied to amended claim 14, this rejection is respectfully traversed.

Claim 14 defines a method of manipulating a load via an attachment to a telescopic material handler. Claim 14 recites that the load comprises a cladding panel, and the method includes flipping the cladding panel over prior to installation. The flipping step includes the steps of attaching the gripping system to a first side of the cladding panel, rotating the cladding panel about an axis generally parallel to a longitudinal axis of the cladding panel, releasing the cladding panel onto a support member, and attaching the gripping system to a second side of the cladding panel. In the Office Action, the Examiner refers to grip 170 and clamp 100, 106 in the Holter patent. The Office Action does not reference the steps defined in claims 21 and 22 (now in claim 14) nor does the Office Action reference a teaching in any of the applied references that

purportedly meets these steps. As a consequence, Applicants submit that this rejection fails to set forth a *prima facie* case of obviousness. In addition, the methodology defined in amended claim 14 allows the device to flip large construction panels and hold them from an opposite side. The claimed methodology is lacking in each of the applied patents, and none of the applied patents has the ability to perform the defined methodology. Indeed, the Holter patent does not have a sufficient range of motion to accomplish the noted methodology. For this reason also, Applicants submit that the rejection is misplaced.

Reconsideration and withdrawal of the rejection are respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the claims are patentable over the art of record and that the application is in condition for allowance. Should the Examiner believe that anything further is desirable in order to place the application in condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Prompt passage to issuance is earnestly solicited.

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to Deposit Account No. 14-1140.

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Respectfully submitted,

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